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## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

13 December 2000 (13.12.00)

International application No.

PCT/US00/12034

Applicant's or agent's file reference

54804PCT4A

International filing date (day/month/year)

03 May 2000 (03.05.00)

Priority date (day/month/year)

07 May 1999 (07.05.99)

Applicant

CHAMBERS, David, C. et al

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

21 November 2000 (21.11.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Juan Cruz

Telephone No.: (41-22) 338.83.38

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# INTERNATIONAL SEARCH REPORT

Int. .tional Application No

PCT/US 00/12034

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A62C2/06

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A62C H02G F16L E04B E06B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94 20055 A (AKRO FIREGUARD PROD INC ;DANKER GEORGE (US); KIRK DONALD (US); MCG) 15 September 1994 (1994-09-15) page 5, line 6 -page 19, line 14; figures ---	1,3-7
X	US 5 378 530 A (METIVAUD GUY ET AL) 3 January 1995 (1995-01-03) column 3, line 37 -column 5, line 2; figures ---	1,5-7
X	US 4 273 821 A (PEDLOW J WATSON) 16 June 1981 (1981-06-16) column 4, line 56 -column 10, line 43; figures ---	1,5-7
X,P	WO 00 23513 A (PARKER HANNIFIN CORP) 27 April 2000 (2000-04-27) page 8, line 4 -page 18, line 4; figures -----	1,5-7

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

18 September 2000

Date of mailing of the international search report

28/09/2000

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
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Authorized officer

Triantaphillou, P

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/12034

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9420055 A	15-09-1994	AU 6398094 A US 5654063 A	26-09-1994 05-08-1997
US 5378530 A	03-01-1995	FR 2692794 A CA 2098765 A DE 69326288 D EP 0576321 A JP 6057846 A	31-12-1993 25-12-1993 14-10-1999 29-12-1993 01-03-1994
US 4273821 A	16-06-1981	US 4189619 A US RE31428 E US RE32131 E	19-02-1980 25-10-1983 29-04-1986
WO 0023513 A	27-04-2000	NONE	



## PATENT COOPERATION TREATY

PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>54804PCT4A</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/US 00/ 12034</b>	International filing date (day/month/year) <b>03/05/2000</b>	(Earliest) Priority Date (day/month/year) <b>07/05/1999</b>
Applicant  <b>3M INNOVATIVE PROPERTIES COMPANY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1

☐ None of the figures.

REPLACED BY  
PCT 3-1-1997

PATENT COOPERATION TREATY

PCT

REC'D 30 JUL 2001

WIPO

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference Hi-bu 002737wo	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/12034	International filing date (day/month/year) 03/05/2000	Priority date (day/month/year) 07/05/1999
International Patent Classification (IPC) or national classification and IPC A62C2/06		
Applicant 3M INNOVATIVE PROPERTIES COMPANY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  21/11/2000	Date of completion of this report  26.07.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Schut, T  Telephone No. +49 89 2399 8970 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/12034

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-11 as originally filed

**Claims, No.:**

1-6 as received on 07/07/2001 with letter of 06/07/2001

**Drawings, sheets:**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☒ the claims, Nos.: 7



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US00/12034

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-7
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-7
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-7
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/US00/12034

**Re Item V:** Reasoned statement with regard to novelty, inventive step or industrial applicability

EP-A-0 476 945 discloses a seal comprising a pad or gasket of 1.8-4.0 mm thickness of intumescent material. The pad is secured to one or more internal surfaces of fittings of channels for cables with an adhesive tape.

WO-A-94/20055 discloses a patch for covering a damaged portion of a wall of a fire resistant container, comprising an adhesive layer for attaching the patch, a fire barrier layer, a scrim embedded within the fire barrier layer and an overlay.

US-A-5 378 530 discloses a fire-resistant material for covering a pipe comprising a supple layer of endothermic material which releases vapours in contact with fire, and an outer fabric impregnated with an intumescent agent.

US-A-4 273 821 disclose an electrical arc and fire protective tape having a mastic coating on fabric or plastic film. The coating expands or intumesces in response to heat to form a porous, expanded or foamy insulating body, The tape may be wound on single or grouped electric power and control cables to restrict fire propagation and to prevent self ignition.

WO-A-00/23513 discloses an intumescent pressure sensitive adhesive composition for gaskets, tapes etc.

None of these documents discloses or suggests a fire stop device with a flexible container which loosely surrounds the intumescent material.

**Re Item VII** Certain defects in the international application

The independent claim should be the two-part form in accordance with Rule 6.3(b) PCT. Those features known in combination from EP-A-0 476 945 being placed in a preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in a characterising part (Rule 6.3(b)(ii) PCT).

The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

**INTERNATIONAL PRELIMINARY**

International application No. PCT/US00/12034

**EXAMINATION REPORT - SEPARATE SHEET**

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Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents EP-A-0 476 945 and US-A-4 273 821 is not mentioned in the description, nor are these documents identified therein.

The unit of length employed in the application is not additionally expressed in terms of the units stipulated by Rule 10.1/(a)/and/(b) PCT.

## CLAIMS:

1. A device for use as a fire stop, which comprises a material that intumesces on exposure to heat, a patch of an adhesive connected to one surface of the intumescent material and a liner that covers the adhesive and is readily detachable from the adhesive by means of a pull, to expose the adhesive.

2. A device as claimed in claim 1 wherein one end of the liner is permanently attached to the intumescent material, whereby after installation of the device the liner extends to serve as a visible marker of the device.

3. A device as claimed in claim 1 or 2 wherein the intumescent material is contained in a flexible container.

4. A device as claimed in claim 3 wherein the flexible container is composed of a fabric net reinforced aluminum foil with polyethylene heat seal layer.

5. A device as claimed in any one of claims 1 to 4 wherein the intumescent material is in the form of one or more elongate strips of a flexible fire barrier felt.

6. A method of providing a fire stop in a space between a hole in a partition and an item passing through the hole, which method comprises wrapping around the item a device as claimed in any one of claims 1 to 5, sliding the device along the pipe into the hole and anchoring the device permanently on the pipe and in the said space by means of the adhesive patch.

7. A partition having a hole passing through it, an item passing through the hole and, in the hole and surrounding the item, a device as claimed in any one of claims 1 to 5, the device being permanently anchored to the pipe by means of the adhesive patch.